FP060 Water Sector Resilience Nexus for Sustainability in Barbados (WSRN S-Barbados)

Annual Performance Report CY2020

Section 1: General Information

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Please note that this is section 1 of the six Annual Performance Report (APR) sections. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

1.1 Please indicate if information provided in this APR is disclosable outside the Green Climate Fund. *

[X] Yes - The Accredited Entity agrees that the information reported is disclosable.

[ ] No - The information reported is partly confidential. The disclosable version of the APR will be attached.

If you select the second option [No - The information reported is partly confidential. The disclosable version of the APR will be attached], please follow the below steps.
- Step 1: Fill in all the sections of the APR with disclosable information.
- Step 2: Save each section using the 'Open as PDF' function provided in the top-right corner. (Do NOT submit an APR at this step).
- Step 3: Attach all these disclosable six sections, including an additional section on COVID-19, to the attachment boxes below, which will be shown once you check the second option only.
- Step 4: Update all the sections of the APR below with non-disclosable information.
- Step 5: Submit the non-disclosable APR with an attachment of the disclosable APR in the PDF format.

1.2 Please indicate if this report has been shared with the relevant NDA(s) for this Funded Activity

Yes

Once the APR is created in the PPMS, please use the 'Open as PDF' function to download the report in PDF format and to share with relevant authorities (i.e. NDAs) before submission. Select 'Yes' only if shared to ALL the relevant NDA(s).

Please Indicate the date of submission to NDA(s)

2021-02-27

If the APR is submitted to multiple NDAs, please indicate the latest date of submission to NDA, and provide the other dates per NDA in the further explanation box below.

Please provide further explanation, if any:

1.3 Funded Activity Title (Project/Programme Title)

Water Sector Resilience Nexus for Sustainability in Barbados (WSRN S-Barbados)

(Information is locked for editing)

1.4 Funding Proposal Reference Number

FP060

(Information is locked for editing)

1.5 Board Meeting Number

19

(Information is locked for editing)

1.6 Accredited Entity contacts for this APR

Full Name

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1.7 Executing Entity(ies)

Full Name of Executing Entity

Caribbean Community Climate Change Centre

Full Name of Executing Entity

Barbados Water Authority

1.8 Project Duration

From

2019-01-16

To

2024-04-16

1.9 Current Year of Implementation

2

Indicate the year number, e.g., '2'

1.10 Annual reporting period covered in this report

From

2020-01-01

To

2020-12-31

Confirmation and Acknowledgement of Information *

* This is a required question to submit section 1 of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in section 1 is complete and ready for submission.

Section 2: Implementation Progress

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Please note that this is section 2 of the six Annual Performance Report (APR) sections. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

2.1 Overall (summary) project progress

Consistent with Clause 8: “Reporting, Monitoring and Evaluation Schedule” of the Funded Activity Agreement FP060, the Green Climate Fund (GCF) requires that the accredited entity submits its reports in accordance with Schedule 4. This Annual Performance Report provides a summary of the overall progress on the implementation progress of the Water Sector Resilience Nexus for Sustainability in Barbados (WSRN S-Barbados) Project. In this report, activities undertaken by the Accredited Entity since January 16, 2019, which are directly aligned to the Project’s Logic Framework are being presented, with specific mention to activities conducted during calendar year 2020. Therefore, progress on the following components and sub-components follow. The total Project is valued at US$ 45,205,010 and the Caribbean Community Climate Change Centre (CCCCC) is directly responsible for implementing the GCF funded activities valued at US$27,605,010. The Barbados Water Authority (BWA) is the co-implementing agency responsible for the implementation of all co-financing activities with support given by the CCCCC for these activities and vice-versa.

Component One:
▪ The BWA has installed 0.42MW PV panels at the Bowmanston Water Pumping Facility and upgraded their transformer and switchgear to accommodate 1.5MW installed capacity.
▪ The Centre entered into a contract with DCH Energy GmbH (6th August 2020) to install 4MW of PV systems at the Belle, Bowmanston and Hampton pumping stations and a 2MW microturbine at the Belle.
▪ DCH Energy GmbH initiated the shipment of the PV panels on November 16th 2020 and are to arrive during February 2021.
▪ Rigorous technical sessions have been conducted to ensure maximum output and optimum design for the systems. The mounting systems, fencing and covid-19 disinfections stations are to be shipped by June 2021.
▪ Due to unprecedented delays, increases in the cost for shipping and containers, the project suffered some major delays. Due to various covid-19 protocols worldwide manufacturers, ports and other logistical staff were reduced or processes halted that contributed to the delay.

Component Two:
▪ The RAFF Charter and Operations Manual was completed and the BWA intends to ensure that the RAFF is fully set up by the end of 2021.

Component Three:
▪ The BWA has adopted the Non-Revenue Strategy developed under this Project. This strategy has been working well and the BWA has been able to reduce the non-revenue water overall. 22.3kms of mains have been replaced. The BWA has installed 305 personal 400-gallon tanks and shall install 625 tanks by 2024. The independent needs assessment was completed during December 2020 and procurement documents are under development to procure 2300 water systems (450 gal) and 29 rainwater harvesting systems (2x1000 gal).
▪ The water tankers have been ordered and will arrive in Barbados in June 2021.
▪ The SCADA equipment has been purchased to implement OTPIRamp.

Component Four:
▪ The BWA, USF and UWI signed a MoU. The USF continues to conduct knowledge management services, which will also provide the foundation for the educational materials that are to be created for the engagement with the general public. The USF has been able to complete 1 symposium, 5 seminars and 2 workshops during 2020.
▪ The communications strategy is completed and implemented in 3 schools in Barbados.
▪ Contracts have been successfully developed for the consultancy services by the USF and the UWI Institute for Gender Studies (IGDS). During this reporting period, the UIW IGDS Team, led by Dr. Tonya Haynes, was able to train 178 persons by the delivery of the Gender and Climate Change mainstreaming course.

Project Management:
▪ Project Teams are in place at the CCCCC and BWA to support the implementation of this Project.
▪ The project successfully recruited a Project Engineer and a Project Officer to support operations in Barbados.
▪ In 2020 there were two (2) Project Steering Committee (PSC) meetings held on 29th May and 24th November. The third PSC will be held in April 2021. A joint symposium for the Project and civil society organizations (CSO) of Barbados is scheduled for February 2021.

Provide a narrative report describing the overall progress on the implementation of the funded activity, focusing on implementation achievements, delays, and challenges according to the planned activities. As relevant, include references to other sections of this report (including Annexes or Attachments). Include a description of key milestones of the funded activity achieved during this reporting period including any deviations from original expectations. Also, describe challenges encountered and actions undertaken to resolve these challenges, and lessons learned during the implementation, including issues related to non-compliance with GCF standards or conditions, if any. In parallel, include positive achievements and better-than-expected results. If any issues have arisen in the last twelve (12) months of implementation that may result in a change to the scope and/or timing of the project, please provide a description of those items and how they have impacted the implementation period and final targets. Kindly make sure that this section just gives an overall summary and doesn't have overlap with other sections.

2.2 Performance against the GCF investment criteria (summary)

The GCF has six investment criteria, and in summary this Project has been actively conducting its implementation to ensure that these investment criteria have been achieved. In addition, the Project Management team has been cognizant of the investment criteria and have aimed to ensure that the activities are carried out in accordance with the anticipated impacts as given in the Project's logic framework. The performance of this Project is thus described below by component and the related activities:

The total impact potential for this Project has been further expanded, the Centre has partnered with the Caribbean Development Bank to conduct online training sessions for the engineers at the BWA and the Project Team to strengthen the institutional capacity, which is linked directly to component 1.

In component 2, the RAFF Charter and Operations Manual was developed from a regional perspective to provide a mechanism for other regional bodies to benefit from the Operations Manual, which can be adjusted and further developed to suit their individual needs. The RAFF also has had a significant impact on the way in which people now see the financial implications of adapting and mitigating the impacts of climate change. During the development of the RAFF Charter, several interviews and a workshop was held to ensure that persons understand Climate change and its impacts to the water-energy nexus.

Component 3 has significantly addressed the sustainable development potential and country ownership criteria. Within component 3, the BWA sought to complete its SCADA program and also to fully adopt necessary frameworks to ensure that the OPTIRamp software can be installed to a fully functioning capacity. In this case the Government of Barbados, through the BWA, has conducted training sessions and has hired additional engineers to monitor the water systems on island. Moreover, with the purchase of the water tankers, the BWA has made significant strides to prepare for the arrival of the tankers and has included the tanker service in its 2021 hurricane preparedness and response mechanism.

Provide a narrative report describing the progress on the funded activity's performance against the GCF investment criteria framework. The performance should be compared against the initial assessment provided in the Board-approved Funding Proposal (section E). The list of the investment criteria as per the current framework is provided below. For each investment criteria outlined below, please include an assessment of current status, changes, progress and impact of the project as well as any impact of project context on the project during this reporting period against the initial baseline scenario and planned activities as per the assessment presented in the approved Funding Proposal. This sub-section 2.2 is not applicable for REDD+ Results-Based Payments Projects. Please write 'Not Applicable' as the response.

Relevant Links

The GCF investment criteria framework

2.2.1 Impact Potential

This criterion seeks to make the “Contribution to the shift to low-emission sustainable development pathways”. Within this Project, Component One seeks to address this criterion mainly by the implementation of solar photovoltaic systems and a natural gas microturbine.

The overall goal of Component One is to install 4.5 MWs of solar PV systems at three water pumping stations (WPS): Belle, Hampton and Bowmanston. Two MWs are to be installed at the Belle and Hampton WPS and 0.5MWs to be installed at the Bowmanston WPS. The BWA has installed 0.5MWs at the Bowmanston WPS. This is a significant development as the Bowmanston WPS did not have any previous low-emission energy sources. With this intervention through this Project, the Government of Barbados, through the BWA has therefore been able to displace about 251.76 tCO2eq (using a displacement factor or 0.7906tCO2eq/MWh with an average of ca. 2653.77 kWh of energy being produced per day at the Bowmanston WPS).

Although the implementation of the 4.5 MWs of solar PV systems are ongoing, this impact potential can also be expanded to include comments on the “Degree to which the programme/project supports the scaling up of low-emission energy in the affected region by addressing key barriers”. In 2020 on island, while the procurement activities were being conducted, with the local and international advertising, this procurement activity had the local attention, in the energy sector, focused on renewables as a vital source of energy for Barbados in the future. To this extent, it was clear that this Project was a contributor to the driving force of the Government’s plan to become fossil free by 2030. This is a very important milestone as the capacity for scaling up of low-emission energy was directly addressed. The BWA was able to demonstrate to other government departments, private entities, civil society organization inter alia, that it is possible to move from a small operation of renewable energy to a larger scale. With the completion of the implementation of the 4.5 MWs of solar PV systems, the BWA will become the first example to illustrate that it can be done and importantly lessons can be shared to assist in overcoming key barriers that other entities in Barbados may encounter.

With regards to the natural gas microtubines, the BWA also was able to contribute to the efforts of further reducing its reliance on the importation of crude oil, which has a higher CO2 emissions factor than natural gas. The BWA installed a 1.5MW microturbine to reduce its crude oil demand. In addition, the micro-turbine units to be procured are to substitute the electrical energy being supplied from fuel oil and diesel during power outages as a result of weather events, thus reducing the overall GHG emissions and carbon footprint of the water sector in Barbados. It was important to consider the GCF assessment for impact potential with indicated: “Implementing renewable energy technologies, which will ‘green’ energy supplies to the water works and also ensure continuity of the power supply for water pumping even during extreme events, which tend to disrupt grid power supplies”. As a result, a major development that was realized in this process was the ability to develop an efficient emergency hybrid system that would be able to maximize the use of the photovoltaic system, thus further reducing the use of fossil fuels and GHG emissions. The proposed system has an advanced design to use the photovoltaic system as much as possible with emergency back-up power being provided by the micro-turbine, therefore reducing the electrical energy being produced by fossil fuels. The micro-turbine has now a secondary requirement that accommodates higher prerequisite for reduced NOx emissions.

Another Indicative assessment factor that should be considered is the “Expected total number of direct and indirect beneficiaries, (reduced vulnerability or increased resilience); number of beneficiaries relative to total population (PMF-A Core 1), particularly the most vulnerable groups”. This is addressed in the number of direct and indirect beneficiaries on the adaptation initiative. In this project, there was an independent needs assessment conducted that identified the following:

- 1,500 potable vulnerable households for water storage tanks;
- Nine potable storage tanks for polyclinics;
- 16 potable storage tanks for primary schools
- 800 households to be retrofitted with rainwater harvesting systems;
- 22 schools to be retrofitted with rainwater harvesting systems;
- 20 community centres to be retrofitted with rainwater harvesting systems; and
- 121 farms to be retrofitted with rainwater harvesting systems.

This activity focused on identifying these direct and indirect beneficiaries to the project for the installation of these water systems. It is important that these identified were the most vulnerable in their various categories.

2.2.2 Paradigm shift potential

The GCF's definition on Paradigm Shift Potential includes "The degree to which the proposed activity can catalyse impact beyond a one-off project or programme investment". Within this project, there are several aspects in which the Project activities seek directly to address a paradigm shift.

With respect to mitigation the GCF's coverage area includes "Potential for scaling up and replication, and its overall contribution to global low-carbon development pathways being consistent with a temperature increase of less than 2 degrees Celsius". Previously, the BWA has had small installations of PV systems scattered at a few water pumping stations over the island. Due to the interventions of this project, the BWA has installed 0.5MWs of solar PV at one of the largest WPS on island. In addition, the BWA has also installed, during the timeline of this project, a further 0.35MWs of solar PV at one of its other stations. The BWA has also joined with the Caribbean Development Bank to install another 0.3MWs of solar PV in the near future. Actually, it is important to also note that within the GCF's paradigm shift potential investment criterion there are the following indicative assessment factors:

▪ Opportunities for targeting innovative solutions, new market segments, developing or adopting new technologies, business models, modal shifts and/or processes
▪ A theory of change for replication of the proposed activities in the project/programme in other sectors, institutions, geographical areas or regions, communities or countries

Regarding opportunities, the RAFF component of this Project is a first of its kind to be implemented in Barbados, and, the Economic Affairs Division in the Ministry of Finance, Economic Affairs and Investment, has keen eyes on the success of the RAFF as the Division also wants to implement a similar revolving fund. Therefore, this manner of local climate finance is providing further opportunities with the lessons learned from the operation of the RAFF to be shared with all stakeholders and interested persons. Moreover, regarding the theory of change it is vital to consider that the RAFF is not geographically restricted to the Belle, Hampton or Bowmanston areas, but it is a national RAFF that can be accessed by all persons who meet the criteria.

The coverage area: "Potential for knowledge and learning" is captured holistically in component four. Component 4 has a heavy focus on knowledge management for this project and the maintenance of a lesson learned database that can be shared with project partners and any other interested persons. The goals of the knowledge management sub-activity is to is to continue the knowledge management (KM) of the training components of the Project under one umbrella, operationalize the training to build professional/human resources skills needed for resilience, NRW reductions, and advise on/contribute to the public education and communication outputs to ensure the water sector resilience language is consistent, and the information being communicated is technically sound and aligned with learning standards across various sectors of the Barbados community and the water sector profession. Under this project over 10 knowledge sharing activities have been conducted with the following included:
▪ Solar Photovoltaic;
▪ ENVISION sustainable infrastructure;
▪ Gender and Climate Change mainstreaming;
▪ Various water and energy trainings
Within component four, during 2020, there was a shift to conduct the internship program virtually, that will be implemented in 2021 with the initial cohort from 2020 joining the cohort for 2021. This will further increase the potential for knowledge and learning. In addition, the World Water Day activities for 2021 are in place and are expected to be conducted during March 2021. In addition, a joint symposium with the Barbados Association of Non-Profit Organization, was scheduled for December 2020, however, due to covid-19 restrictions in Barbados, this event is now scheduled to take place during March 2021. To date, 12 persons received solar PV training, 25 received their ENVISION certification, 121 completed the Gender and Climate Change mainstreaming course, 3 schools completed their water and energy education sessions, and there were a combination of 8 seminars, symposiums and conferences held.

2.2.3 Sustainable development potential

The sustainable development potential of this project has had tremendous progress since the 2019 report.
The activity-specific sub criteria under the coverage area of “environmental co-benefits” state “Expected positive environmental impacts, including in other result areas of the Fund, and/or in line with the priorities set at the national, local or sectoral level, as appropriate”. In component 1, it is expected that the air quality around the Belle, Hampton and Bowmanston sites will improve. Although air quality is not necessarily a major aspect of this project, it is important to note that with the future installation of 4.5 MWs of solar PV, there will be the decreased reliance on the combustion of fossil fuels to generate electricity to operate these WPS.

The indicative assessment factor under the Social co-benefits coverage area includes the following factor: “Potential for externalities in the form of expected improvements, for women and men as relevant, in areas such as health and safety, access to education, improved regulation and/or cultural preservation”. The positive health impacts encompass the water systems and the access to training being implemented by components 3 and 4 respectively. Within component 3, with the installation of the potable water tank systems, and rain water harvesting systems, there will be 1. Distributed storage of water for 1500 households, 800 households and 121 farms with the water harvesting systems. This is critical as this intervention reduces a portion of the strain on the potable water demand and therefore increasing the long-term availability of water to promote positive health practices. When we consider the current covid-19 situation, it has been a reminder of the importance that clean water plays in safeguarding the public to airborne health threats. This is a national priority, and the BWA has augmented the vehicle tanker national scope, by their efforts to procure additional vehicle tankers to ensure that the rural areas that do not have access to running water (ca. 0.2% of the population).

The economic co-benefits of the of this Project can be viewed as wide ranging. This project contributes to the stability of Barbados’ macroeconomic environment, mitigates its susceptibility to inflationary pressures and external shocks and increases revenue to the government. Barbados will benefit from foreign currency savings resulting from reduced dependence on fossil fuels due to the PV installation. Barbados import US$322.7 million (2014) in crude oil and a significant portion is used in the production of electricity and transportation. It is estimated by BWA that the proposed PV systems will potentially save US$244,494 per year in foreign currency. Additionally, the replacement of leaky mains will reduce the amount of energy needed to pump water through the distribution system; hence, resulting in foreign currency saved that otherwise would have been used to purchase crude oil for energy production. It is estimated that NRW reduced from 43% to 38% has the potential to save US$3,500,000 per year in foreign currency.

The reduction in demand for foreign currency and imports helps to reduce Barbados susceptibility to inflationary pressures and external shocks. Increases in price of crude oil on the international market tend to increase the price for energy locally and in the medium term is passed on to end users, businesses and households, in the form of price increases. As highlighted in the feasibility analysis in Section F.1, inflation has the potential to undermine the success of this project and Barbados’ ability to provide water service to the population at a reasonable price. Inflationary pressures cause the operating and maintenance costs of BWA to grow faster than its revenue; therefore, in the long-run it would make a loss, assuming small to moderate changes in water tariffs rates and historic population growth rates. Additionally, inflationary pressures curb the fiscal space of the central and local governments, limited their ability to react both in the short and long –run.

This project will help to mitigate imported inflation, contagious shocks from trade and the stressor of the NIR. Barbados as a small open economy has a fixed exchange rate regime as such managing the demand for foreign currency and the stock Net International Reverse (NIR) is essential to maintaining its pegged to the US$ at 2:1. The design of this project encompasses this by aiding in reducing the burden place on the NIR, through reduction in imported crude oil for energy production.

This project considers gender-sensitive policies and development impact by pledging to balance and rebalance male and female participation and contribution in the implementation of this project as well as equity in the distribution benefits of this project. The Project aims to broaden participation of underrepresented groups in the various aspects of the Project. The university programmes associated with the Project will be evaluated for their gender diversity and in the cases where imbalances exist, this programme will recruit with an aim to strike a better balance. The proportion of men and women recruited for the jobs for the Project will depend on the targeted numbers to bring diversity to each of the programme areas. PV installation at the BWA’s previous sites had 13% female employees and the aim of this project will be to increase the participation of females from 13% to at least 30%.

2.2.4 Needs of the recipient

The GCF has identified that the “Needs of the Recipient” discussion should focus on the following as defined “Vulnerability and financing needs of the beneficiary country and population”. As such, this Project has aimed to ensure that it focuses on the Water-Energy Nexus, with specific adaptation measures concentrated in the energy consumption for the production and distribution of water by the Barbados Water Authority. As such, the Project has been able to impact, both directly and indirectly, all of the population of Barbados.

These Project impacts are seen in the form of addressing the management of the already scare water resource and to ensure that during the implementation of this Project, that vulnerable groups are positively impacted, without any further disruption to the gender balance. In fact, utilizing this Project’s Gender Action Plan, it has sought to decrease the difference between genders when regarding the total benefit of this Project and its related interventions. The ability to have water available and the ability to supply or deliver water to the population, including the most vulnerable, remains a critical undertaking. Furthermore, the water-energy nexus remains critical, as energy is required to pump/deliver the water to individuals. As such, to maintain the current water tariff or to increase the efficiency of use of water, it is important to hybridize the supply of water with the generation of energy.

This Project aims to directly address the risks of reduced freshwater supplies associated with climate change. The principal risk to freshwater supplies will be manifest through impacts on aquifer recharge the investigation of which forms part of this project. Research conducted to date has indicated that the combination of increased temperatures coupled with reduced precipitation will significantly reduce aquifer recharge. Other work looking at coastal flooding suggests even though overall rainfall is likely to reduce the changes in precipitation patterns, particularly increases in rainfall intensity (including the effects of tropical storms) will increase storm-water run-off. Increased storm-water run-off would divert water away from recharge. However, the impact of the combination of reduced recharge and sea level rise particularly for the coastal aquifers has not been evaluated. Understanding the potential impact of changes in temperature, precipitation patterns and sea level rise and their effect on water availability forms one of the actions under this project.

Considering component one, there was a dire need for the BWA to decrease its reliance on fossil fuels to pump water. This contributes and complements the activities conducted by the BWA at the Bowmanston WPS. Further, this then shows that there will be a decrease on the importation of oil for generation of electricity, and with the installation of the 4.5 MW, there will be a more significant decrease in the CO2 and GHG emissions. The Government of Barbados has a plan that by 2030, all energy will be produced from renewable energy sources, thus, the recipient is still in need of the GCF’s interventions, however, this Project can only contribute to fulfilling the needs of Barbados to a finite degree.

The prediction of Drought for Barbados in 2020 has inevitably occurred, as Barbados is currently experiencing a prolonged drought event. To address the vulnerability of water scarcity at the household level and also to minimize this effect on the farmers, the completed needs assessment has been expanded to also include the needs of the farmers and to suggest methodologies/ practices that the farmers can employ. With this needs assessment, it has been identified that there is over 2664 households, farmers and emergency hurricane shelters combined. Thus, the BWA has further expanded this programme to include over 1000 households to their own Potable water tank programme to be funded locally.

During the implementation of this Project, it is critical to note that there was some initial focus to ensure that both males and females were included and was striving to have equal representation of males and females. However, this Project went even a step further to include representation at the Project Management level of both males and females. To date, there is a balance between males and females that work from both the CCCCC and BWAs Project Team.

2.2.5 Country Ownership

Under the investment criteria “Country Ownership” Barbados continues to excel in its Governmental ownership of this Project, through its financial contributions and also its ability to implement its obligated co-financing activities. The BWA has completed the installation of 22.3km of mains and has made remarkable achievements in the development of Demand Management Areas (DMAs) following the Non-Revenue Water Management Plan developed in 2019. Moreover, the BWA has enforced its environmental Health and Safety policies and has an Emergency environmental Health and Safety committee. Although currently many of these discussions and meetings focus on the coronavirus pandemic, the fact that this committee was established early in 2020, there was a mechanism in place to deal with the various public health issues. at the United Nations General Assembly, the Prime Minister of Barbados reiterated that Barbados would be 100% fossil fuel free by 2030. This task has been realized by the fact that the key stakeholders of this Project have been using the platform provided by the GCF to propel the country forward and lead the way towards sustainable development and a cleaner future. The GCF’s National Designated Authority for Barbados signed an agreement with the GCF’s Director of County Programming Pa Ousman Jarji. This Project has indeed led to a catalyst for paradigm shift in Barbados.

The BWA continues to be actively involved in the national climate change steering group and serves as one of the Principals on this cabinet sub-committee. Thus, at this steering group, the BWA ensures that the activities to be completed and that have been competed (being implemented) are a part of the Government’s national priorities. Moreover, there is the cross-checking to ensure that there is the coherence with existing policies and, where these policies are outdated, the BWA is able to bring this to the attention of the steering committee so that more relevant policies can be developed. The project is designed with consideration for BWA’s responsibility to the communities it serves, which includes monitoring, assessment, control, and protection of the water resources in the public’s interest. It buildings on an ongoing policy of education on water conservation and empowering the most vulnerable persons living in districts susceptible to water outages due to drought conditions. For example, the following policies are now being revised:
1. National water reuse Act
2. Rainwater harvesting green paper
To further demonstrate the determination of Barbados in the fight against climate change, the Government of Barbados has subsequently appointed a Special Advisor to the Prime Minister on Climate Change issues and has also established a National Climate Change Committee with special focus on the energy, environment, and water sectors inter alia. In addition, the Government of Barbados in 2015 previously pledged to achieve nationwide greenhouse gas emissions of 44% by 2030, however, due to the potential outputs of this Project and other nationally endorsed projects, the Government of Barbados has now pledged in 2019 to achieve an island 100% free of fossil fuels by 2030, as outlined in its revised Nationally Determined Contributions. In addition, analogous with the GCF’s initial assessment, relevant local policies have been considered in the design of specific activities such as potable water storage systems and rainwater harvesting procedures and the commitment of execution through the BWA contributes to ensuring that all interventions will be strongly coordinated with the national water sector policies and actions.

2.2.6 Efficiency and Effectiveness

To measure the efficiency and effectiveness of this project it must be placed in the context of Barbados' fresh water resources and the water authority previous actions, current operations and the challenges the water authority faces going forward. The mains sources of Barbados' fresh water resources are: 2 springs; 24 wells, all ranging in depth from 119.5 to 322 feet; and, desalination. Barbados is extracting approximately 90% of it ground water sources; therefore, water produced at the Desalination Plant using the reverse osmosis process is mixed with the groundwater from the wells to complement BWA's general supply.

The Non-Revenue Water (NRW) component was vital to the fulfilment of the conditions precedent for disbursement and the CCCCC and the BWA have been very intimately involved with the implementation of the NRW strategy at the BWA. The NRW strategy was completed in August 2018 and the BWA has been working very diligently to achieve some of the gaps identified. It has been noted that there will be some time needed to fully implement the NRW strategy however, the following enabling activities have been conducted by the BWA: there has been a replacement of 90,000 customer meters out of 116,000 with ultra-sonic smart meters that are geo-referenced. To date 42 production meters at pumping and re-pumping stations have been installed. A system has been installed and is being used to monitor day-to-day operations of the pumps and reservoir levels. A SCADA Control Room has been set up and is operational. A start has been made on setting up on District Metered Areas (DMAs) island-wide and proving their integrity using new logging and detection equipment.

The project is a worthwhile investment as the demand for water increases. With no increase in the demand for water the IRR is 19%; however, with a mere 0.5% increase in demand the IRR increase to 19%. Economically, the project is desirable whether there are increases in demand for water or not. With benefits attributed to carbon emission reduction and reduction in NRW, the project net benefit to society ranges from US$43 million to US$46 million with corresponding IRR of 43% to 46%, depending on how much demand for water increases in the future and assuming BWA will be able to meet that demand. These estimates are conservative as the economic analysis ignores the built resilience in the pumping stations to tropical weather systems, employment created, foreign currency savings and associated spill-off effects. If these benefits were taken into consideration the benefit to society (economic, social and environment) of this project would be significantly more.

This project was assessed by way of a Cost-Benefit Analysis (CBA) and is set within the operations of BWA. Assuming a useful life of 30 years, it utilizes baseline information for BWA operation and maintenance costs for 2016 and 2017 and projection made by the BWA for 2018, 2019 and 2020. These costs are adjusted for inflation annually, with the exception for wages, salaries and allowances which are adjusted for inflation every 5 years. Besides wages and salaries, the largest line item in BWA operation and maintenance costs is the cost of electricity. Electricity cost was 16% of total operation and maintenance costs in 2016; however, due to energy efficiency initiatives that BWA implemented the energy cost as a percentage of total operational and maintenance is expected to decline marginally. In 2016, wages, salaries and allowances and desalination account for approximately 39% of total operational and maintenance. Depreciation is approximately 12% per year and maintenance and repairs expenses is approximately 1-3% per year.

Assuming no change per year in per capita water demand and that BWA is able to meet this demand, the NPV of the project to society is US$28.8 million with an internal rate of return of 28%. The project becomes more desirable if the demand management for water increases. With increases in the demand for water of 0.5%, 1% and 2% per year the project become desirable with a NPV of the benefits to society is US$54.7, US$82.5 and US$144.4 million, which correspond to internal rate of returns of 31%, 34% and 39% respectively. If the NPV of BWA's revenue is ignored the NPV of the project to society is US$94.7 million.

2.3 Project Outputs Implementation Status

Use 'Add Row' button to add multiple outputs and/or activities reported against one output

Project Output Name

Output 1 Photovoltaic Renewable Energy Systems with Back-up Natural Gas turbines Installed and Integrated

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 1.1.1 Design, Purchase and Installation of 2.0 MW Grid-tied PV Switchgear, Transformer, and a 2.0 MW Microturbine (Natural Gas) at Belle Pumping Station

Status

Activity started - progress delayed

Implementation Progress

25 %

Progress for the relevant reporting period

The first shipments were initiated from Shanghai. These solar PV panels were routed through Miami and were held in Miami for an extended period of time awaiting shipment from Miami to Barbados.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The first shipments of the solar PV panels are expected to arrive in the first quarter of 2021. The mounting systems, inverters and DC/AC cables and are expected to arrive in Barbados during 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 1 Photovoltaic Renewable Energy Systems with Back-up Natural Gas turbines Installed and Integrated

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 1.1.2.1 Design, Purchase and Installation of 0.5 MW Grid-tied PV (solar) plant at Bowmanston Pumping Station

Status

Activity started - progress delayed

Implementation Progress

25 %

Progress for the relevant reporting period

The first shipments were initiated from Shanghai. These solar PV panels were routed through Miami and were held in Miami for an extended period of time awaiting shipment from Miami to Barbados.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The first shipments of the solar PV panels are expected to arrive in the first quarter of 2021. The mounting systems, inverters and DC/AC cables and are expected to arrive in Barbados during 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 1 Photovoltaic Renewable Energy Systems with Back-up Natural Gas turbines Installed and Integrated

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 1.1.2.2 Design, Purchase and Installation of 0.5 MW Grid-tied PV (solar) plant at Bowmanston Pumping Station.

Status

Completed

Implementation Progress

100 %

Progress for the relevant reporting period

The BWA has completed this sub-activity with the installation of 0.5MW DC power.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

Performance of the operating PV systems to be reported in terms of tCO2eq avoided emissions.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 1 Photovoltaic Renewable Energy Systems with Back-up Natural Gas turbines Installed and Integrated

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 1.1.3 Design, Purchase and Installation of 2.0 MW Grid-tied PV (solar), Switchgear (HT & LT) and Transformer at Hampton Pumping Station.

Status

Activity started - progress delayed

Implementation Progress

15 %

Progress for the relevant reporting period

The manufacturer (sub-contractor) informed the contractor that the microturbine order will commence in 2021. The contractor has a contract with the subcontractor. The team reviewed the technical specifications and approved the ordering of the microturbines.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The production of the microturbines are to begin and then shipped to Pennsylvania for final fitting and climate proofing. The microturbines are expected to be delivered to Barbados in 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 2 Establishing Revolving Adaptation Fund Facility (RAFF)

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 2.1.1 Establish fund administration

Status

Activity started - progress on track

Implementation Progress

20 %

Progress for the relevant reporting period

The RAFF charter and operations manual was completed. The RAFF is now a formally accepted document by the BWA for implementation during 2021 and 2022.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

During 2021, it is expected that the BWA will set up the internal procedures and put all relevant staff in place and also conduct training sessions on the RAFF for all staff.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 2 Establishing Revolving Adaptation Fund Facility (RAFF)

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 2.1.2 Establish MOUs, protocols and guidelines for the fund

Status

Activity started - progress on track

Implementation Progress

25 %

Progress for the relevant reporting period

The RAFF charter and operations manual was completed. The RAFF is now a formally accepted document by the BWA for implementation during 2021 and 2022.

Establish MOUs - IP = 0%

Establish Protocols - Monitoring - IP = 0%

Establish Protocols - Evaluation - IP =0%

Guidelines for the fund - Charter and Manual - IP = 100%

Overall IP = (0+0+0+100)/4 = 25%

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

During 2021, it is expected that the BWA will set up the internal procedures and put all relevant staff in place and also conduct training sessions on the RAFF for all staff.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 2 Establishing Revolving Adaptation Fund Facility (RAFF)

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 2.1.3 Open Bank Account(s)

Status

Activity not yet due

Implementation Progress

5 %

Progress for the relevant reporting period

The RAFF charter and operations manual was completed. The RAFF is now a formally accepted document by the BWA for implementation during 2021 and 2022.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

During 2021, it is expected that the BWA will set up the internal procedures and put all relevant staff in place and also conduct training sessions on the RAFF for all staff.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.1.1 Development of Climate Change Adaptation Water Master Plan.

Status

Activity started - progress on track

Implementation Progress

20 %

Progress for the relevant reporting period

The BWA has started their Climate Change vulnerability assessment and the baseline study has been completed. There was some delay in obtaining information from some institutions due to the imposed covid-19 protocols. The AE has drafted the terms of reference for a 'Groundwater Assessment, Modeling, and Management in Barbados' that will contribute to the overall Master Plan.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

It is expected that both the 'Climate Change vulnerability assessment' and the 'Groundwater Assessment, Modeling, and Management in Barbados' report will be completed.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.2.1 Replacing defective mains

Status

Activity started - progress on track

Implementation Progress

100 %

Progress for the relevant reporting period

The BWA has replaced 22.3 km of mains.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

All the mains under this project will be replaced. And this activity is to be concluded in 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.3.1.1 Developing real time decision making tool

Status

Activity started - progress on track

Implementation Progress

20 %

Progress for the relevant reporting period

A contract was signed for the installation of a SCADA system as a pre-curser for the OPTIRamp.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The timeline for the full expansion of SCADA to support OPTIRamp should be mid-way by the end of 2021. The BWA's software infrastructure is currently in a dire need for supervisory control and monitoring equipment and all the necessary hardware upgrades will be identified.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.3.1.2 Developing real time decision making tool (leak detection equipment)

Status

Activity started - progress on track

Implementation Progress

30 %

Progress for the relevant reporting period

The BWA has installed 28 leak detection equipment, which include the acoustic water monitors. The country has been divided into demand management areas to be able to better conduct installations and to better manage the water resources. The NRW program continues to be implemented.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The data from the DMAs will be utilized to ensure that there is adequate coverage under the installation of SCADA. Although OPTIRamp will be installed after the SCADA software is fully installed, it is on the horizon but not a deliverable during the next reporting period.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.4.1.1 Execution of Needs Assessment and Installation of Potable Water Storage Systems

Status

Activity started - progress on track

Implementation Progress

21 %

Progress for the relevant reporting period

1. Needs Assessment (Consultant) - completed 100%.
2. Purchase and Install (1500) Personal Tank at homes - procurement documents development underway - IP = 0%
3. Purchase and Install Storage at QEH - Contract signed 30.12.2020 - IP=0%
4. Purchase and Install Storage at Polyclinics - procurement documents development underway - IP = 0%.
5. Purchase and Install Storage at Schools - procurement docs. dev. underway - IP=0%.
6. Procure and supply tankers - contract signed 15.09.2020, chasis production Nov - Dec 2020 (completed) - IP = 20%

The technical specifications have been drafted.

Overall IP = (100+0+5+0+0+20)/6= 21%

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

N/A.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.4.1.2 Installation of Potable Water Storage Systems

Status

Activity started - progress on track

Implementation Progress

49 %

Progress for the relevant reporting period

The results from the needs assessment was used to assist in the development of the draft technical specifications and general bidding document. Although the activity has not been launched in 2020, there was significant progress made to advance this activity to the next stage of launching. One of the lessons learned during this process was to ensure that there is an understanding of the requirements from the household to be able to receive the potable water systems or rainwater harvesting systems. One major issue encountered was the determination of who will be responsible for the tanks for rented accommodation. It was then determined that the landlord will need to give permission to the tenant for any temporary structures added to the property.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The procurement activity for the potable and rainwater harvesting systems are to be launched during the first quarter of 2021. A contract is expected to be singed in Q2 and it is anticipated that the first delivery and installations are to occur in Q4 of 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.5.1 Installation of Rainwater Harvesting (RWH) Systems at Public Facilities (Schools, Community Centres), Farms and Private Homes

Status

Activity started - progress on track

Implementation Progress

5 %

Progress for the relevant reporting period

The results from the needs assessment was used to assist in the development of the draft technical specifications and general bidding document. Although the activity has not been launched in 2020, there was significant progress made to advance this activity to the next stage of launching. One of the lessons learned during this process was to ensure that there is an understanding of the requirements from the household to be able to receive the potable water systems or rainwater harvesting systems. One major issue encountered was the determination of who will be responsible for the tanks for rented accommodation. It was then determined that the landlord will need to give permission to the tenant for any temporary structures added to the property.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The procurement activity for the potable and rainwater harvesting systems are to be launched during the first quarter of 2021. A contract is expected to be singed in Q2 and it is anticipated that the first delivery and installations are to occur in Q4 of 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.5.2 Retrofitting of infiltration (suck) wells

Status

Activity not yet due

Implementation Progress

0 %

Progress for the relevant reporting period

This activity is to be initiated in the second quarter of 2021.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

This activity is to be initiated in the second quarter of 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 3 Building Resilience to Climate Change and Disruptions in Water Supply

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 3.5.3 Develop a groundwater model for Barbados

Status

Activity started - progress on track

Implementation Progress

3 %

Progress for the relevant reporting period

This activity is to be initiated in the second quarter of 2021. However, the draft terms of reference have been developed and shared with the co-executing entity for their input and review.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

This activity is to be initiated in the second quarter of 2021.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 4 Personnel trained and certified, Public Awareness Campaign and Policies for water sector resilience and PPPs in Barbados

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 4.1.1 Develop educational materials and a mechanism that builds BWA and local capacity for climate resilient decisions and climate proofing its existing infrastructures, sustainability, stakeholder and gender, and risk reduction and safety

Status

Completed

Implementation Progress

100 %

Progress for the relevant reporting period

There was a communications consultancy that was conducted during 2020 that produced and tested the educational materials. This activity was jointly supported by the University of the West Indies Cave-Hill Campus Institute for Gender and Development studies and the University of South Florida - Department of Civil and Environmental Engineering. It is important to note that there was collaboration between this consultancy and the knowledge management consultancy to build on lessons learned during 2019 during the ENVISION training and certification.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

N/A.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 4 Personnel trained and certified, Public Awareness Campaign and Policies for water sector resilience and PPPs in Barbados

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 4.1.2 Provide theoretical as well as practical training related to the installation, operation, maintenance and monitoring of photovoltaic systems, leak detection technology and techniques, water storage systems and rainwater harvesting

Status

Activity started - progress on track

Implementation Progress

10 %

Progress for the relevant reporting period

There were theoretical training provided for stakeholders regarding the operation, installation and monitoring of PV systems. The Knowledge management services is on track to provide an outline of the complementary training that is needed during 2021 or 2022 when physical face-to-face trainings can be resumed. The training on Envision® Credentialing reached 33 persons and 29 were certified.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

The hands on training for the operation, installation and monitoring of PV systems.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 4 Personnel trained and certified, Public Awareness Campaign and Policies for water sector resilience and PPPs in Barbados

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 4.2.1 Share lessons learnt to spur greater public and entrepreneurial involvement in climate change adaptation and mitigation in the water sector resilience initiatives.

Status

Activity not yet due

Implementation Progress

0 %

Progress for the relevant reporting period

This activity is to be initiated in the second quarter of 2022.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

This activity is to be initiated in the second quarter of 2022.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 4 Personnel trained and certified, Public Awareness Campaign and Policies for water sector resilience and PPPs in Barbados

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 4.2.2 Promote and encourage the public to utilize RAFF and take action to mitigate and adapt to climate variability and change

Status

Activity not yet due

Implementation Progress

0 %

Progress for the relevant reporting period

This activity is to be initiated in the second quarter of 2022.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

This activity is to be initiated in the second quarter of 2022.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 4 Personnel trained and certified, Public Awareness Campaign and Policies for water sector resilience and PPPs in Barbados

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 4.3.1 Develop a policy for Barbados' water sector resilience to combat climate change

Status

Activity not yet due

Implementation Progress

0 %

Progress for the relevant reporting period

This activity is to be initiated in the second quarter of 2022.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

This activity is to be initiated in the second quarter of 2022.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

Project Output Name

Output 4 Personnel trained and certified, Public Awareness Campaign and Policies for water sector resilience and PPPs in Barbados

The output name should match with the output reported in the sub-section 2.4.3. If you have multiple activities to be reported against one output, you need to write down the same output name for every activity.

Project Activity Name

Project Activity 4.3.2 Develop a policy for Public Private Partnership (PPP) to combat climate change.

Status

Activity not yet due

Implementation Progress

0 %

Progress for the relevant reporting period

This activity is to be initiated in the second quarter of 2022.

Provide an updated progress on this project activity for the relevant reporting period, including delays and issues encountered, key milestones reached, and lessons learned, including issues related to non-compliance with GCF standards or conditions, vis-à-vis expectations, if any. In parallel, include positive achievements and better-than-expected results.

Key milestones and deliverables for the next reporting period

This activity is to be initiated in the second quarter of 2022.

Please include a list of key milestones and deliverables expected to be executed in the next reporting period.

2.4 Progress Update on the Logic Framework Indicators

Values of Baseline, mid-term target and final targets should be the same from the approved funding proposals unless calculation methodologies were revised in agreements with the GCF. Please attach a supporting document(s) describing the calculation methodology of the current value of all the indicators in Section 6; the indicators cover core, impact, outcome, and output levels. If there is a change in the methodology, you need to include clear justifications for the change and changed values as compared to the previous year.

This sub-section 2.4 is not applicable for REDD+ Results-Based Payments Projects. Please write 'Not Applicable' as the response.

2.4.1 Core Indicators

Select applicable core indicators

- [X] Mitigation Core Indicator 1 - Tonnes of carbon dioxide equivalent (tCO2eq) reduced as a result of GCF funded project/programme
- [ ] Mitigation Core Indicator 2 - Cost per tCO2eq decreased for GCF funded project/programme
- [ ] Mitigation Core Indicator 3 - Volume of finance leveraged by GCF funding (Disaggregated by public/private source)
- [X] Adaptation Core Indicator 1 - Direct Beneficiaries of GCF funded project/programme
- [X] Adaptation Core Indicator 2 - Indirect Beneficiaries of GCF funded project/programme
- [X] Adaptation Core Indicator 3 - Number of total beneficiaries relative to total population

Mitigation Core Indicator 1 - Tonnes of carbon dioxide equivalent (tCO2eq) reduced as a result of GCF funded project/programme (Unit: tCO2eq)

Please provide the ex-post 'Current Value' on a cumulative basis. Please note that the values should be based on total funding (GCF funding and co-financing). The 'Final Target' is the amount of emission reduced up to the end of implementation. The 'Expected lifetime emission reductions overtime' is an estimate of emission reductions over the lifetime. If the end of lifetime coincides with the end of implementation then please provide the same value for 'Final Target' and 'Expected lifetime emission reductions over time'.

Baseline	Current Value	Mid-term Target	Final Target
0 tCO2eq	tCO2eq	7339.46 tCO2eq	7339.46 tCO2eq

Expected lifetime emission reductions overtime

220184 tCO2eq

Remarks (including changes, if any)

Medium term is up to 2033. Useful life of the PV systems is 30 years. Displacement factor is 0.7906tCO2eq/MWh.

Adaptation Core Indicator 1 - Direct Beneficiaries of GCF funded project/programme (Units: number of individuals and percentage %)

Please provide ex-post 'Current Value' on a cumulative basis. Please note that the values should be based on total funding (GCF funding and co-financing).

Baseline	**Baseline (% of female)**
145	49 %
Current Value	**Current Value (% of female)**
18134	50.3 %
Mid-term Target	**Mid-term Target (% of female)**
94501	20 %
Final Target	**Final Target (% of female)**
189002	34.6 %

Remarks (including changes, if any)

The direct beneficiaries of this component are those persons that directly consume water produced at the Bowmanston Pumping Stations (BPS) as well as persons who will be directly employed to manage and implement the project and BWA's employees who will be in charge with maintaining the infrastructure implemented by the Project. The BPS serves approximately 38218 persons, which is approximately 13.4% of the population.
The direct beneficiaries are distributed as follows:
Bowmanston Pumping Station
17,198
(based on % installed capacity and emergency back-up microturbine)

Employees at BPS
52 (15.4%) female

Under the Personal Tank Programme at least 10% (1,300 households) of the total 13,000 households with physically challenged person(s) or differently abled individuals will benefit from the personal water tanks.
Personal Tank Programme:
884
(based on installed tanks)

Under this programme, Barbados' only hospital (QEH) will also benefit by having increased water storage from 14 hours to between 72 to 96 hours. This activity is to be implemented during the next reporting period.

Adaptation Core Indicator 2 - Indirect Beneficiaries of GCF funded project/programme (Units: number of individuals and percentage %)

Please provide ex-post 'Current Value' on a cumulative basis. Please note that the values should be based on total funding (GCF funding and co-financing).

Baseline	**Baseline (% of female)**
290	49 %
Current Value	**Current Value (% of female)**
4220	44.4 %
Mid-term Target	**Mid-term Target (% of female)**
142498	50.4 %
Final Target	**Final Target (% of female)**
284996	50.4 %

Remarks (including changes, if any)

Beyond the direct beneficiaries, the implications of the Project are far reaching and crosscutting. It will benefit the agriculture sector and tourism sector by increasing the amount of water available to the public. There is also the multiplier effect associated with the injection of capital and the increase employment associated labour income. Furthermore, there will be the reduced demand for foreign exchange, which will help to create an investor friendly environment.

Rural Farmers that benefit from BPS:
46% (installed capacity) of 722 total
Assumption, 1 farmer supplies food to 10 individuals
Sharing of water from PTP during water shut off.

Adaptation Core Indicator 3 - Number of total beneficiaries relative to total population (Units: percentage %)

Please provide ex-post 'Current Value' on a cumulative basis. Please note that the values should be based on total funding (GCF funding and co-financing).

Share of direct beneficiaries relative to total population

Baseline	Current Value	Mid-term Target	Final Target
0.1 %	6.34 %	50 %	100 %

Share of female direct beneficiaries relative to total population

Baseline (female)	Current Value (female)	Mid-term Target (female)	Final Target (female)
49 %	49.4 %	50.4 %	50 %

Share of indirect beneficiaries relative to total population

Baseline	Current Value	Mid-term Target	Final Target
0.1 %	8.5 %	50 %	100 %

Share of female indirect beneficiaries relative to total population

Baseline (female)	Current Value (female)	Mid-term Target (female)	Final Target (female)
49 %	49.4 %	50.4 %	50 %

Remarks (including changes, if any)

These benefits coupled with the size of Barbados and the integrated economic system that exists causes the indirect benefits to extend to the entire population of Barbados. Barbados' population is estimated at 284,996.

2.4.2 Impact Indicators

Select applicable impact indicators

- [X] M1.1 Tonnes of carbon dioxide equivalent (tCO2eq) reduced or avoided as a result of increased low-emission energy access and power generation
- [ ] M2.1 Tonnes of carbon dioxide equivalent (tCO2eq) reduced or avoided as a result of increased access to low-emission transport
- [ ] M3.1 Tonnes of carbon dioxide equivalent (tCO2eq) reduced or avoided as a result of buildings, cities, industries and appliances
- [ ] M4.1 Tonnes of carbon dioxide equivalent (tCO2eq) reduced or avoided as a result of sustainable management of forests and conservation and enhancement of forest carbon stocks
- [ ] A1.1 Change in expected losses of lives and economic assets due to the impact of extreme climate-related disasters in the geographic area of the GCF intervention
- [ ] A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)
- [ ] A1.3 Number of Fund funded projects/programmes that supports effective adaptation to fish stock migration and depletion due to climate change
- [ ] A2.1 Number of males and females benefiting from introduced health measures to respond to climate-sensitive diseases
- [ ] A2.2 Number of food secure households (in areas/periods at risk of climate change impacts)
- [X] A2.3 Number of males and females with year round access to reliable and safe water supply despite climate shocks and stresses
- [ ] A3.1 Number and value of physical assets made more resilient to climate variability and change, considering human benefits (reported where applicable)
- [ ] A4.1 Coverage/scale of ecosystems protected and strengthened in response to climate variability and change
- [ ] A4.2 Value of ecosystem services generated or protected in response to climate change

M1.1 Tonnes of carbon dioxide equivalent (tCO2eq) reduced or avoided as a result of increased low-emission energy access and power generation (Unit: tCO2eq)

Please provide the ex-post 'Current Value' on a cumulative basis. Please note that the values should be based on total funding (GCF funding and co-financing). The 'Final Target' is the amount of emission reduced up to the end of implementation. The 'Expected lifetime emission reductions overtime' is an estimate of emission reductions over the lifetime. If the end of lifetime coincides with the end of implementation then please provide the same value for 'Final Target' and 'Expected lifetime emission reductions over time'.

Baseline	Current Value	Mid-term Target	Final Target
0 tCO2eq	1510 tCO2eq	7339 tCO2eq	7339 tCO2eq

Expected lifetime emission reductions overtime

220184 tCO2eq

Remarks (including changes, if any)

Current value reported is for co-financing activities. Medium term is up to 2033. Useful life of the PV systems is 30 years. Displacement factor is 0.7906tCO2eq/MWh.

A2.3 Number of males and females with year round access to reliable and safe water supply despite climate shocks and stresses (Units: number of individuals and percentage %)

Please provide ex-post 'Current Value' on a cumulative basis.

Baseline	Baseline (% of female)
10000	50 %

Current Value	Current Value (% of female)
10305	50 %

Mid-term Target	Mid-term Target (% of female)
120000	50 %

Final Target	Final Target (% of female)
189000	50 %

Remarks (including changes, if any)

Assumptions: Stable economic environment. Cost per unit of electricity is US$0.38. RHS efforts do not compete with BWA but complements its operations. Public education and capacity building spur job market for RWH

2.4.3 Project/Programme-level Outcome & Output Indicators

Please provide ex-post 'Current Value' on a cumulative basis. If you have multiple outputs to be reported against one outcome, you need to write down the same outcome name for every output. Likewise, if you have multiple indicators to be reported against one output, you need to write down the same output name and corresponding outcome name for every indicator.

Use 'Add row' button to add multiple outcomes, outputs and/or indicators.

Results Area Type	Outcome Name
Mitigation	6.3a Percentage of water systems equipped with climate resilient low emission energy systems.

Output Name (under the afore-mentioned outcome)

Output 1 Photovoltaic Renewable Energy Systems with Back-up Natural Gas turbines Installed and Integrated

Please write 'Not Applicable' if the below-mentioned indicator is to be reported directly at the outcome level.

Indicator Name

Indicator M6.3a. Percentage of water systems equipped with climate resilient low emission energy systems.

Unit

% (of water systems equipped with climate resilient low emission energy systems)

Baseline	Current Value	Mid-term Target	Final Target
0	6	25	54

Remarks (including changes, if any)

The BPS serves approximately 38218 persons, which is approximately 13.4% of the population. 45% of capacity installed to support the BPS.

Results Area Type	Outcome Name
Mitigation	6.3b MWs of low emission energy capacity installed.

Output Name (under the afore-mentioned outcome)

Output 1 Photovoltaic Renewable Energy Systems with Back-up Natural Gas turbines Installed and Integrated

Please write 'Not Applicable' if the below-mentioned indicator is to be reported directly at the outcome level.

Indicator Name

6.3b MWs of low emission energy capacity installed.

Unit

MW

Baseline	Current Value	Mid-term Target	Final Target
0	0	6.5	6.5

Remarks (including changes, if any)

2.5 Report on changes during implementation (include actual and expected changes)

Accredited Entity- Caribbean Community Climate Change Centre
There has been no change to the beneficial ownership structure or the management changes of the Accredited Entity. Changes to the implementation structure has been identified in the Inception report and no changes have subsequently been made.

Government/Other Policies
Since the inception of this Project there has been some developments with respect to the changing of laws in Barbados. However, it should be noted that these changes by the Government of Barbados support the implementation of this Project and also is projected to assist in promoting a national paradigm shift in Barbados. The Government of Barbados has now pledged in 2019 to achieve an island 100% free of fossil fuels by 2030, as outlined in its revised Nationally Determined Contributions.

Other material changes
No significant material changes have been identified up to this reporting period that could influence the overall outcome of the Project.

Describe changes to the project during the reporting period. In particular, the report should cover elements such as change of beneficial ownership structure, management changes of the Accredited Entity, policies and other elements relevant for the project, and any other material change that could influence the overall outcome of the project.

2.6 Implementation challenges and lessons learned

Challenge encountered

Outdated electrical installations at various households in the community

Describe the challenge faced during the last twelve (12) months of implementation that may result in a change to the scope and/or timing of the project; please provide a description and how they have impacted the implementation period and final targets.

Challenge type

Operational

Impact on the project implementation

Moderate

Measures adopted

All persons were informed of the electrical requirements to accept the potable water systems. There is a gravity option available for those persons who have no electricity in their household or those who have no access to electricity due to their financial circumstances. Some of vulnerable have support from the government through welfare programs and those who did not seek welfare assistance was informed of these public services.

Lesson learned and other remarks

Ensure that households are able to accommodate electrical upgrades before attaching a potable water storage system to their houses.

Challenge encountered

Delivering presentations for World Water Day at various schools during the covid-19 pandemic.

Describe the challenge faced during the last twelve (12) months of implementation that may result in a change to the scope and/or timing of the project; please provide a description and how they have impacted the implementation period and final targets.

Challenge type

Operational

Impact on the project implementation

Minor/Solved

Measures adopted

Consultations were held with the Parents Teachers Association (PTAs) to alleviate concerns and to offer assurances that all health and safety protocols will be followed.

Lesson learned and other remarks

Communication with the stakeholders regarding all activities, especially those that require face-to-face interactions.

Challenge encountered

Flexibility of Banking institutions regarding correspondent banking relations.

Describe the challenge faced during the last twelve (12) months of implementation that may result in a change to the scope and/or timing of the project; please provide a description and how they have impacted the implementation period and final targets.

Challenge type

Financial

Impact on the project implementation

High

Measures adopted

A justification was prepared which highlighted the link between the LOC issues and the challenges faced by small developing countries in relation to the international practice of de-risking and its impact on corresponding banking relations and the release of funds. The contract was then amended to allow for interim payments and reimbursable payments.

Lesson learned and other remarks

Potential suppliers of large contracts should be asked about how their banking institutions will allow them to use their Line of Credit for international transactions.

Confirmation and Acknowledgement of Information *

* This is a required question to submit section 2 of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in section 2 is complete and ready for submission.

Section 3: Financial Information

Section 3: Financial Information

Please note that this is section 3 of the six Annual Performance Report (APR) sections. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

3.1 Approved Budget for entire project period as per FAA

Currency

USD

(Information is locked for editing)

GCF Funding (Equity)

GCF Funding (Grants)

27 605 010

(Information is locked for editing)

GCF Funding (Guarantees)

GCF Funding (In-kind)

GCF Funding (Loans)

GCF Funding (Results-Based Payment)

3.1.1 Total GCF Funding

27 605 010

(Information is locked for editing)

Please confirm if the afore-mentioned values are different as per your knowledge.

No differences to be reported.

3.2 Co-financing

Currency

USD

(Information is locked for editing)

Co-financing (Equity)

Co-financing (Grants)

17 600 000

(Information is locked for editing)

Co-financing (Guarantees)

Co-financing (In-kind)

17 600 000

Co-financing (Loans)

Co-financing (Results-Based Payment)

3.2.1 Total Co-financing

17 600 000

(Information is locked for editing)

Please confirm the afore-mentioned values are different as per your knowledge.

No differences to be reported.

3.3 Disbursements Details (Cumulative to this reporting period)

3.3.1 Total GCF Disbursement

17 927 000

(Information is locked for editing)

Currency

USD

(Information is locked for editing)

GCF Equity Disbursement

GCF Grants Disbursement

17 927 000

(Information is locked for editing)

GCF Guarantees Disbursement

GCF In-kind Disbursement

GCF Loans Disbursement

GCF Results-Based Payment Disbursement

Please confirm the afore-mentioned values are different as per your knowledge.

No differences to be reported.

3.3.2 Co-Financing Disbursement

16 560 936.29

Provide the cumulative amount of disbursements from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

Choose currency

USD

3.3.3 Total Project Disbursement

34 487 936.29

Provide the cumulative amount of disbursements from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

Choose currency

USD

Please provide comments on sub-section 3.3, if any.

3.4 Expenditure details (Cumulative to this reporting period)

Choose currency

Please select

GCF Equity Expenditures

Provide the cumulative amount of expenditures from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

GCF Grants Expenditures

2 616 895.37

Provide the cumulative amount of expenditures from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

GCF Guarantees Expenditures

Provide the cumulative amount of expenditures from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

GCF Loans Expenditures

Provide the cumulative amount of expenditures from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

3.4.1 GCF Expenditures

2 616 895.37

Provide the cumulative amount of expenditures from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

3.4.2 Co-financing Expenditures

16 560 936.29

Provide the cumulative amount of expenditures from the start of implementation to the end of this reporting period. Indicate '0' if no amount is disbursed yet.

3.4.3 Total Project Expenditures

18

Please provide comments on sub-section 3.4, if any.

3.5 Investment & Other Income (Cumulative to this reporting period)

Reporting Level for investment

Please select the second option 'Accredited Entity Portfolio Level' only if AEs have more than one project where all GCF funds are held in a consolidated GCF Special Account.

[X] Project Level

[ ] Accredited Entity Portfolio Level

Choose currency

USD

Project Level Investment & Other Income

50 090.20

Please provide comments on sub-section 3.5, if any.

3.6 Report on AE fees (Cumulative to this reporting period)

Reporting Level for AE fees

Please select the second option 'Accredited Entity Portfolio Level' only if AEs have more than one project where all GCF funds are held in a consolidated GCF Special Account.

[X] Project Level

[ ] Accredited Entity Portfolio Level

Choose currency

USD

Project Level AE Fees

966 686.99

Please provide comments on sub-section 3.6, if any.

3.7 Annual Financial Performance Report

Please download the Financial Performance Report Template in Excel.

Financial Performance Report Template

This sub-section 3.7 is not applicable for REDD+ Results-Based Payments Projects. Please provide a separate 'Financial Progress Details' in Section 6.

Please attach the Annual Financial Performance Report here.

Section 3 -APR 2020 (Financial Information)As of December 2020 FINAL.xlsx

Please provide comments on the attachment.

See section 6: attachment, the budget reallocation to support the changes made in Section 3.2 (Financial Progress-Grant). The budget reallocation is within the 10% as per the FAA clause 6. Administration of Grant by the Accredited Entity, 6.01 Permitted Reallocation. Any reallocation among the Funded Activity Components described in the Budget resulting in a variation of more than ten percent (10% of the previously agreed Budget for the Component from which the funds are to be reallocated, must be approved in writing by the Fund in advance.

Confirmation and Acknowledgement of Information *

* This is a required question to submit section 3 of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in section 3 is complete and ready for submission.

Section 4: Environmental and Social Safeguards & Gender

Section 4: Environmental and Social Safeguards & Gender

Please note that this is section 4 of the six Annual Performance Report (APR) sections. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

4.1 Implementation of environmental and social safeguards and gender elements

Please provide information on the project or programme on the following: (1) key risks and impacts as identified; (ii) compliance with applicable laws and regulations including FAA conditions and covenants; and (3) progress in the implementation of environmental and social management plans and programs including monitoring activities undertaken during the implementation of the funded activity.

4.1.1 The information includes description on any changes in the key environmental and social risks and impacts as identified and arising from the implementation including any unanticipated risks and impacts (ex. from changes in laws and regulations) and, based on these if any change in the project's environmental and social risk category. In case of a change in the E&S risk category for the project, please provide an explanation.

During this reporting period, there have been no significant key risks and impacts that have been identified. However, to ensure that all potential risks are mitigated as they can be reasonably foreseen, the following continue to be monitored and the mitigation steps will continue to be developed as any increase of the risks occur.

Outcome 1
The photovoltaic systems to be installed may have a potential risk that includes the malfunctioning of the systems, which inevitably may result in system downtime. Mitigation measures were built into the procurement documents and are now perquisites for qualifying bidders that include: service contracts, leasing options with maintenance included, and capacity building components are included for monitoring, operations, and maintenance with problem solving integrated throughout. A proposed maintenance and operations schedule, as well as onsite training are now incorporated into the procurement documents as a delivery criterion. In addition, technologies used will not be unique to BWA and parts and expertise to fix will be available in Barbados for jobs that do not require servicing by the seller. These measures are anticipated to lower the level of this risk to low.

Outcome 2
A potential risk identified was the underutilization of the RAFF by the general public for climate resilience implementation at the household and business level. However, during the launch of the Project various stakeholders were once more reminded of the RAFF and the benefits of the RAFF. To offer risk mitigation, component four has been designed to ensure that a widespread education and outreach campaign be conducted and also activities will be planned to engage with the public and with entrepreneurs. The entrepreneurial engagement is designed to encourage growth in the sector and assist with educational materials to convince potential customers of benefits of resilience implementation to them. These activities should reduce this risk to a percentage lower than 5%.

The Project has initially categorized as a category B project having "activities with potential mild adverse environmental and/or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures." The Project is still a category B project.

Since the inception of this Project there has been some developments with respect to the changing of laws in Barbados. However, it should be noted that these changes by the Government of Barbados support the implementation of this Project and also is projected to assist in promoting a national paradigm shift in Barbados. The respective laws are as follows as included in annex 2 of this report:

Overall Project
Control of Disposable Plastics Act, 2019-11
An Act to make provision for a prohibition on the importation, manufacture, and retail of certain disposable plastics, authorize the use of certain types of disposable plastics and provide for related matters.

A draft cabinet paper has been presented to the Government of Barbados (Parliament) to consider a new water zoning policy and to consider a new water re-use act. These draft acts were first presented to Parliament in 2016 as the "draft Water Reuse Act and draft Water Reuse Regulations, 2006", however, since 2018 the Government has been very actively involved in climate change and its impact on water in Barbados. This draft act will have impact on the "Town and Country Planning Act, 1985 Cap. 240", "Town and Country Development Planning Order, 1972" and "Barbados Water Authority Act, 1989 Cap. 274A"

4.1.2 The information should include status of compliance with applicable laws and regulations of the country as well as the relevant conditions or covenants under the FAA. This can be captured in the table below:

Status of compliance with applicable laws and regulations and the conditions and covenants specifically addressing ESS & Gender under FAA

Compliance Type

Condition

Compliance Title & Description

Status of compliance with applicable laws and regulations and the conditions and covenants under FAA

Status of compliance

Applicable laws and regulations/conditions and covenants Status of compliance
Condition 1: Fulfilment of the conditions for effectiveness set out in Clause 7;
All conditions were fulfilled for effectiveness set out in Clause 7 of the FAA and accepted.

Condition 2: Delivery to the Fund by the Accredited Entity of evidence of the authority of the person or persons authorized to sign each Request for Disbursement under this Agreement, unless otherwise notified by the Accredited Entity, and the authenticated specimen signature of each such persons; Evidence Delivered by the AE to the GCF and accepted.

Condition 3: Written confirmation to the Fund from the Accredited Entity that the GCF Account has been established, together with a copy of the SWIFT message issued by the relevant bank to the Accredited Entity or a letter from the Accredited Entity's bank, where the GCF Account is opened, issued to the GCF confirming and indicating the owner of the account, name of the bank and the bank account number; Evidence Delivered by the AE to the GCF and accepted.

Condition 4: Delivery to the Fund by the Accredited Entity of the final copy of the charter for the RAFF ("RAFF Charter"), which shall include: (1) the eligibility criteria applied by BWA for the selection of the loans and grants to be financed by the RAFF, and (2) the methodology for calculation of the amount of funds to be transferred by BWA to the RAFF at a given period, which shall take into consideration the cost reductions resulting from the implementation of the Funded Activity; and Delivered by the AE to the GCF and accepted.

Condition 5: Submission to the Fund by the Accredited Entity of the completed financial management and procurement risk assessment of BWA to the satisfaction of the Accredited Entity. Delivered by the AE to the GCF and accepted.

Condition 6: Other than in relation to the first Disbursement, submission to the Fund by the Accredited Entity of evidence that at least seventy per cent (70%) of the funds previously disbursed by the Fund have been cumulatively spent on the Funded Activity; In progress.

Condition 7: Other than in relation to the first Disbursement, submission to the Fund by the Accredited Entity of APRs and Financial Information in accordance with the AMA; N/A for this reporting period.

Condition 8: Delivery to the Fund by the Accredited Entity of a Request for Disbursement, within thirty (30) calendar days prior to the date on which the Disbursement is requested to be made, which shall not be later than the Closing Date; Delivered by the AE to the GCF and accepted.

Condition 9: Confirmation to the Fund by the Accredited Entity that there is no event of default occurring with respect to this Agreement and/or the Subsidiary Agreement; There has been no event of Default during this reporting period.

Condition 10: Delivery to the Fund by the Accredited Entity of evidence indicating the status and amount of Co-financing disbursed and applied to the implementation of the Funded Activity up to the date of the request for funds made by the Accredited Entity; and Delivered by the AE to the GCF and accepted.

Condition 11: If the GCF Proceeds, requested by the Accredited Entity in the Request for Disbursement, will be used to fund contingencies, as described in the Budget, inclusion in the Request for Disbursement of written justification by the Accredited Entity for such request and submission to the Fund of evidence that the relevant amount requested by the Accredited Entity is needed. N/A during this reporting period.

Compliance Type

Covenant

Compliance Title & Description

Status of compliance with applicable laws and regulations and the conditions and covenants under FAA

Status of compliance

Covenant 1: Inform the Fund, in the APRs to be submitted in accordance with the AMA, or at any time upon its request, on the status of the Co-financing that has been disbursed and applied to the implementation of the Funded Activity;

N/A during this reporting period.

Covenant 2: Ensure that the Co-financier (i) does not amend or alter the Co-financing in such way that the Co-financing is reduced or delayed, unless it is previously consulted with, and consented by, the Fund; and (ii) promptly inform the Fund of any cancellation, reduction or prepayment (whether in whole or in part) of the Co-financing;

Compliant.

Covenant 3: Ensure that the Co-financier provides its Co-financing in a timely manner for the completed and uninterrupted execution of the Funded Activity, as described in the Funding Proposal; Compliant.

Covenant 4: In case any amendment or modification is entered to or otherwise agreed by the Accredited Entity with respect to the Subsidiary Agreement, inform of such event and furnish to the Fund the executed copies of such amendment or modification within five (5) calendar days from its execution. For the avoidance of doubt, the Accredited Entity shall ensure that such amendment or modification does not contravene the terms and conditions provided in this Agreement and the AMA;

N/A during this reporting period.

Covenant 5: Undertake and/or put in place any adequate measures in order to ensure that the management of the environmental and social risks and impacts arising from the Funded Activity complies at all times with the recommendations, requirements and procedures set forth in the Environmental and Social Assessment (“ESA”), which was provided by the Accredited Entity to the Fund before the Approval Decision;

N/A during this reporting period.

Covenant 6: Obtain, or ensure that BWA shall obtain, all land and rights in respect of land that are required to carry out the Funded Activity and shall promptly furnish to the Fund, upon its request, evidence satisfactory to the Fund that such land and rights in respect of the land are available for the purposes of the Funded Activity;

Compliant.

Covenant 7: Prior to commencing any construction works or activities for the implementation of the Project, submit a detailed Environmental and Social Management Plan (“ESMP”) related to the relevant construction works or activities to be executed, in a form and substance satisfactory to the Fund;

N/A during this reporting period.

Covenant 8: Apply, in accordance with its own policies and procedures, its own fiduciary principles and standards relating to AML/CFT in the implementation of the Funded Activity;

Compliant.

Covenant 9: In case of a change of the authorized representative to sign the Request for Disbursement, provide, together with the Request for Disbursement, evidence, satisfactory to the Fund, of the authority of such person to sign the Request for Disbursement and the relevant authenticated specimen signature of such person;

N/A during this reporting period.

Covenant 10: During the tenor of this Agreement, ensure that the outputs of the WSRN S-Barbados, align with the NRW Strategy Activities, are monitored and reported on in the APRs to be submitted in accordance with the AMA; Outputs are compliant with the NRW strategy activities.

Covenant 11: Include in the Subsidiary Agreement, to be entered into between the Accredited Entity and BWA, the detailed financial, procurement and implementation arrangements of the Project, as well as to require compliance by BWA, with the requirements of the AMA and this Agreement; Compliant.

Delivered by the AE to the GCF and accepted.

Covenant 12: If any amendment to the RAFF Charter is made, immediately inform the Fund of the amendment and deliver a copy of the amended RAFF Charter to the Fund within five (5) days of such amendment;

N/A during this reporting period.

Covenant 13: Ensure that the RAFF Operations Manual shall include the detailed eligibility criteria for the selection of the loans and grants to be financed by the RAFF, in accordance with the RAFF Charter delivered to the Fund pursuant to Clause 9.01(a)(iv) above, and following approval of the RAFF Operations Manual by the Accredited Entity, within five (5) calendar days, deliver to the Fund a copy of the amended RAFF Operations Manual; and The RAFF Charter was delivered by the AE to the GCF and accepted.

The RAFF Operations Manual has been completed and is attached as an annex in accordance with the approved implementation schedule.

Covenant 14: If any amendment to the RAFF Operations Manual is made, immediately inform the Fund of the amendment and deliver a copy of the amended RAFF Operations Manual to the Fund within five (5) days after the approval of the amendment by the Accredited Entity. The RAFF Charter was delivered by the AE to the GCF and accepted.

The RAFF Operations Manual has been completed and is attached as an annex in accordance with the approved implementation schedule.

Compliance Type

Law / Regulation

Compliance Title & Description

Status of compliance with applicable laws and regulations and the conditions and covenants under FAA

Status of compliance

Law or regulation 1.

N/A during this reporting period.

4.1.3 Provide a report on the progress made in implementing environmental and social management plans (ESMPs) and frameworks (ESMFs) describing achievements, and specifying details outlined in the tables below.

Implementation of ESMPs and ESMFs

Activities implemented during the reporting period, including monitoring

During this reporting period, there have been no significant key risks and impacts that have been identified. However, to ensure that all potential risks are mitigated as they can be reasonably foreseen, the following continue to be monitored and the mitigation steps will continue to be developed as any increase of the risks occur.

Outcome 1
The photovoltaic systems to be installed may have a potential risk that includes the malfunctioning of the systems, which inevitably may result in system downtime. Mitigation measures were built into the procurement documents and are now perquisites for qualifying bidders that include: service contracts, leasing options with maintenance included, and capacity building components are included for monitoring, operations, and maintenance with problem solving integrated throughout. A proposed maintenance and operations schedule, as well as onsite training are now incorporated into the procurement documents as a delivery criterion. In addition, technologies used will not be unique to BWA and parts and expertise to fix will be available in Barbados for jobs that do not require servicing by the seller. These measures are anticipated to lower the level of this risk to low.

Outcome 2
A potential risk identified was the underutilization of the RAFF by the general public for climate resilience implementation at the household and business level. However, during the launch of the Project various stakeholders were once more reminded of the RAFF and the benefits of the RAFF. To offer risk mitigation, component four has been designed to ensure that a widespread education and outreach campaign be conducted and also activities will be planned to engage with the public and with entrepreneurs. The entrepreneurial engagement is designed to encourage growth in the sector and assist with educational materials to convince potential customers of benefits of resilience implementation to them. These activities should reduce this risk to a percentage lower than 5%.

The Project has initially categorized as a category B project having “activities with potential mild adverse environmental and/or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.” The Project is still a category B project.

Since the inception of this Project there has been some developments with respect to the changing of laws in Barbados. However, it should be noted that these changes by the Government of Barbados support the implementation of this Project and also is projected to assist in promoting a national paradigm shift in Barbados. The respective laws are as follows as included in annex 2 of this report:

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An Act to make provision for a prohibition on the importation, manufacture, and retail of certain disposable plastics, authorise the use of certain types of disposable plastics and provide for related matters.

A draft cabinet paper has been presented to the Government of Barbados (Parliament) to consider a new water zoning policy and to consider a new water re-use act. These draft acts were first presented to Parliament in 2016 as the “draft Water Reuse Act and draft Water Reuse Regulations, 2006”, however, since 2018 the Government has been very actively involved in climate change and its impact on water in Barbados. This draft act will have impact on the “Town and Country Planning Act, 1985 Cap. 240”, “Town and Country Development Planning Order, 1972” and “Barbados Water Authority Act, 1989 Cap. 274A”

The Fair-Trading Commission (FTC) has become very actively involved in ensuring that there is a fair market in the energy sector and that due to the increases in renewable energy systems in Barbados that the general population is not negatively affected. The Fair-Trading Commission assumed regulatory responsibilities on January 2, 2001 pursuant to the Fair-Trading Commission Act, CAP. 326B. The Commission is responsible for the enforcement of the provisions of the Utilities Regulation Act, CAP. 282, the Telecommunications Act, CAP. 282B, the Fair Competition Act CAP. 326C and the Consumer Protection Act, CAP. 326D. Additionally, the Feed in Tariff has been reviewed and a new policy was issued on September 29th 2019.

Outputs during the reporting period

Key environmental, social and gender issues, risks and impacts addressed during implementation

There was a reduction in the physical interaction (face-to-face meeting) of many of our stakeholders and generally the public. This was in response to the current global health crisis as a result of the 2019 novel coronavirus.

Any pending key environmental, social and gender issues needing accredited entity’s actions and GCF attention

N/A.

4.1.4 Provide information on how the GCF Independent Redress Mechanism, as well as the AE's GRM (e.g. contact details, accessibility, and basic procedures of such mechanisms), is brought to the attention of executing entities, people, and beneficiaries in the project target area and the public in accordance with the relevant ESMS/ESIA.

The AE's GRM is discussed and shared with all stakeholders, executing entities and persons that are involved or impacted by the Project. This is the same way that the AE also informs of the GCFs IRM and also the BWAs version of a GRM. Regarding access to the AE's and BWA's GRM, any person can call the AE of BWA or, they can lodge their concerns online via the two websites available. In addition, a letter can also be physically sent to either organization.

4.1.5 Include a description of the actions undertaken towards increasing the relevant stakeholders' engagement in the project environmental, social and gender elements.

The information in this subsection should be provided for all projects regardless of the E&S risk category for the project.

Implementation of the stakeholder engagement plan

Activities implemented during the reporting period

Project Steering Committee meeting 1

Dates and venues of engagement activities

29th May 2020
-Zoom Platform

Information shared with stakeholders

Virtual Meeting Room Open
Opening remarks
i. Introductions – Project Team (CCCCC)
ii. Introductions – Project Team (BWA)
Introductions by nominated PSC
Role of PSC (TOR discussion)
Ratification of PSC TOR
i. Project Overview – GCF
ii. Financial Review – GCF
ii. Project Overview- BWA
ii. Financial Review – BWA
Discussion/ Comments
i. Timeline of Reports
ii. GCF financed
iii. BWA financed
Follow-up actions
Any other business
Closing remarks

Outputs including issues addressed during the reporting period

Activities implemented during the reporting period

Project Steering Committee meeting 2

Dates and venues of engagement activities

24th November 2020
-Zoom Platform

Information shared with stakeholders

Virtual Meeting Room Open
Call to Order
Adoption of the Minutes (PSC meeting no.1)
i. Brief Introductions – Project Team (CCCCC)
ii. Brief Introductions – Project Team (BWA)
Brief Introductions by nominated PSC
Review follow up actions
i. Project Update report – GCF
ii. Financial update – GCF
ii. Project update- BWA
ii. Financial update – BWA
Questions
Follow-up actions
Any other business
Closing remarks

Outputs including issues addressed during the reporting period

4.1.6 Implementation of the grievance redress mechanism - list on the grievances received in the reporting period with the description of the grievance, the date the grievance was received, and the resolution of the grievance.

Description of issues/complaints received during the reporting period	Date of receipt

Description of resolution	Status of addressing issues/complaints

4.2 Gender Action Plan

The activities conducted thus far and that are ongoing incorporates the gender management plan at all levels. Future Project initiatives also plan to mainstream gender into all activities – fostering of utility/university/community/private sector partnerships, promotion of stakeholder engagement, exchanging of knowledge, building of workforce, and supporting of entrepreneurship opportunities – to increase resilience of people and the water sector of Barbados to climatic natural disasters like droughts, tropical storms and hurricanes. As managers of homes, caregivers, service workers in the tourism industry, and heads of 62.2% of poor households, women in Barbados are more vulnerable to water disruptions. They, however, make up a smaller percentage of the students or workforce aligned with water infrastructure services at a time when Barbados and the Caribbean region should make major investments in this infrastructure. While this Project provides benefits that cut across several industries, sectors, communities, and vulnerable groups, it also increases participation of women in water sector resilience both within the Barbados Water Authority (BWA) and across Barbados.

Outcome 1: Improved/Increased Resilience to Storm Events and BWA's Carbon Footprint Reduced. Increased capacity of population to understand, monitor, and operate Renewable Energy (RE) systems, and improved understanding of gender barriers associated with RE industry in Barbados. Analogous with the Project's gender action plan, consideration of gender has been included in the draft Terms of References for contractual services associated with this project and other projects supported by the BWA that contribute to the co-financing activities. Ongoing progress is being made to make this gender consideration utility wide at the BWA. The BWA will conduct a gender assessment under their "Water Supply Network Upgrade Project" for the utility to use as a benchmark. Currently the planned activities are on track to achieve this outcome.

Outcome 2: Adaptation and Mitigation Initiatives Expanded through a Revolving Fund. Both men and women will be encouraged to access fund equally to make their homes and businesses resilient to climate change. The draft RAFF charted and draft Terms of Reference for the completion of the RAFF operations manual incorporates this implementation arrangement according to the Gender Action Plan. The current RAFF charter has guidelines that consider gender mainstreaming, PR materials and pathways that reach equal numbers of men and women. Currently the planned activities are on track to achieve this outcome.

Outcome 3: Improved resilience to climate change and disruptions in water supply. Gender mainstreamed into development of water masterplan, decision making for mains replacement, potable water storage, and RWH with equal numbers of men and women benefitting from interventions. It is important to note that the BWA has already installed 305 personal tanks and has replaced 6.2km of mains. A research paper was published by W. Isaacs entitled "Opportunities to Mainstream Gender in Water and Wastewater Infrastructure Projects: A Case Study in Barbados". This provided key baseline information on gender in the water sector in Barbados. The water user survey revealed a statistical significant association between gender and type of water storage container used at the household level. Men were more likely than women to report use of larger plastic buckets and tanks, while women showed a preference for smaller buckets and bottles. Identification and consideration of design parameters such as preference for type and size of storage receptacle, system elevation, position of cleaning access point, and need for a pump will facilitate or limit the successful adoption or adaptation of rainwater harvesting systems. This has been considered in the preparation of the needs assessment for the Potable Water Storage and Rainwater Harvesting systems. Currently the planned activities are on track to achieve this outcome.

Outcome 4: Greater capacity, knowledge and awareness to build Climate Resilience in the Water Sector. Gender mainstreamed in climate resilience for water sector. A presentation was received on the proposal for component 4 and included an emphasis on gender considerations. These considerations were analogous with the implementation arrangement for component four, which included: Mainstreaming gender into new policies for water sector resilience, Public Private Partnerships in Barbados to combat climate change, and Producing and disseminating educational material to reach diverse audiences in Barbados and regionally on gender mainstreaming for water sector resilience in Barbados. Currently the planned activities are on track to achieve this outcome.

The current project implementation take into considerations the recommendations of the Gender Action from the baseline gender analysis completed for this Project were to: identify clear gender objectives and targets prior to project implementation to ensure their incorporation in the Project, allocate budget to appoint a gender focal point that would coordinate these activities, mainstream gender in existing and new policies for water sector resilience in Barbados to combat climate change, include socio-economic information as a criterion for prioritization of locations for project interventions and target training for water sector resilience to increase representation of women in key positions.

Provide a progress report on the gender action plan developed during project preparation stage for the reporting period. This will primarily be a report on activities undertaken and results achieved as a result of completion of an activity. Further it should also indicate if the project is on track to achieving the intended outcome(s). The reporting should be done for activities, targets and indicators already set in the action plan including on vulnerable groups (youth, poor, female heads of households, etc.) as would have been identified in the gender analysis and action plan. If activities or targets are not achieved as per plan, reasons should be provided, and recourse action should be proposed. Please include a reporting on any changes or deviations. Include a Report on implementation challenges and lessons learnt and how these will inform on-going actions and what action will be taken by when to address the challenges faced. Incorporate both quantitative data and qualitative report of the performance of such actions, and on progress on actions identified.

4.2.1 Progress on implementing the project-level gender action plan submitted with the funding proposal

Activity / Action

Conduct workshop with entrepreneurs and other relevant stakeholders, including training programs, for addressing gender integration in RE sector in Barbados. Train BWA employees on RE systems, operation & maintenance.

Indicator

List of RE participants in stakeholder consultation.

Baseline

0

Target, including sex-disaggregation

2020 Target: 50% female participation. Baseline gender analysis of renewable energy sector in Barbados produced, including recommendations for integrating gender into RE sector.

Budget

54 000

Currency

USD

Report on annual progress

During 2020, the Project conducted 3 PV training workshops. These workshops were held by the Caribbean Centre for Renewable Energy and Energy Efficiency and Mr. Mark Popovic, a consultant from the Caribbean Development Bank. For these workshops, there was equal attendance of males and females representing the achieved target thus far. To note specifically, there were 10 persons for the first two sessions conducted by CCREEE and 6 persons in the final training hosted by the CDB.

Activity / Action

3.2.1: Replacing defective mains

Indicator

No. of women impacted based on report on mains replacement.

Baseline

0

Target, including sex-disaggregation

2023 Target: report shows that gender was considered in site selection and contractor selection.

Budget

10 000 000

Currency

USD

Report on annual progress

In 2020 a total of 22.3km of main were replaced. On these routes it is anticipated that approximately 6% of the population directly benefitted from these replacements. This is approximately 17,222 persons with approximately 9,558 of these persons being female.

Activity / Action

3.4.1.2: Installation of Potable Water Storage Systems:
Purchase and Install Personal Tank at homes. Retrofit of Water tanks & Reservoirs Refurbishments

Indicator

Database of vulnerable populations and needs integrated into GIS database.

Baseline

50

Target, including sex-disaggregation

2020 Target: database includes a gender layer, that focused on the balance on the impact of the intervention for both males and females.

Budget

7 000 000

Currency

USD

Report on annual progress

The Needs assessment was completed that identified the following:
- 1,500 potable vulnerable households for water storage tanks;
- Nine potable storage tanks for polyclinics;
- 16 potable storage tanks for primary schools
- 800 households to be retrofitted with rainwater harvesting systems;
- 22 schools to be retrofitted with rainwater harvesting systems;
- 20 community centres to be retrofitted with rainwater harvesting systems; and
- 121 farms to be retrofitted with rainwater harvesting systems.

This activity focused on identifying these direct and indirect beneficiaries to the project for the installation of these water systems. It is important that these identified were the most vulnerable in their various categories.
Of these numbers a minimum of 50% of the households and farms were female owned or majority operated. In addition, the BWA installed 305 tanks, an increase from the 50 tanks installed in 2019.

Activity / Action

4.1.1 ENVISION Training

Indicator

The number of persons certified with ENVISION.

Baseline	Target, including sex-disaggregation
0	The Target was equal participation of males and females.

Budget	Currency
23 780	USD

Report on annual progress

During 2019 and 2020, there were 25 persons that completed the ENVISION training.
There was a target to have equal participation of females and males participate in this training. The target for participation was achieved with 20 males and females both participating. However, regarding the completion of the ENVISION certificate 16 females completed the training and 19 males.

Activity / Action

Gender mainstreaming and Climate Change

Indicator

Number of BWA staff trained on gender mainstreaming

Baseline	Target, including sex-disaggregation
0	250 BWA staff trained on gender

Budget	Currency
100 000	USD

Report on annual progress

162 staff members completed the Gender mainstreaming and Climate Change course.

4.3 Planned activities on environmental and social safeguards for the next reporting period

The installation of the solar photovoltaic systems and microturbine include requirements for minimizing impacts to habitats and ecosystem services and more specific biodiversity surveys as part of the application to TCDPO. PV infrastructure projects will be installed to minimize visual impact from loss of green space and minimize unsightly wiring etc. in design plans. Landscaping around the project should improve areas that had become overgrown. PV is located in Zone 1 areas for groundwater protection. Land to be used for Project would not displace any inhabitants. A resettlement action plan or a resettlement policy framework are not necessary.

Encourage general public to access RAFF. Make BWA's website more interactive with educational tools that integrate with social media to engage customers with climate resilient solutions for Barbados. Create videos/documentary, organize event(s) to raise awareness, etc. During this calendar year, there was the development of a project website to make information more readily available to the public.

Continued mains replacement program: the implementation process for this activity is ongoing and during implementation when the pipes are being replaced, there will be temporary negative impacts that directly affect the environment as old pipes are being extracted from the ground and new ones installed. Mitigating efforts must be made to address environmental impacts that stem from the excavation practices, equipment usage, chemical selection, and employees' behaviour while onsite. The Project is focused on water supply and so water is a material that is consumed by households and businesses. It also includes off grid renewable and clean energy solutions. The water needed does not add to the amount of water required by households. The Project seeks to reduce non-revenue water, and should therefore reduce water consumption.

Strong knowledge exchange and outreach component to reduce activities that would result in negative consequences. Targeted recruitment to reach persons underrepresented in given job positions associated with Project will be completed. Development of a gender training program in conjunction with the UWI Institute of Gender Studies that builds capacity to address gender and infrastructure across the island and beyond.

Provide a list of activities in the ESMP to be implemented in the next reporting period. Include relevant deliverables such as reports or action plans, and other project specific products. Please include the monitoring schedule concerning ESS (including other potential vulnerable groups and indigenous people) for the next annual reporting period.

4.4 Planned activities on gender elements for the next reporting period

During 2021, the following activities are to be implemented that focus on the Gender Plan:
-Gender Mainstreaming and Climate Change.
-ISO45001 training.

Provide a list of activities in the gender action plan to be implemented in the next reporting period. Include relevant deliverables such as reports or action plans, and other project specific products including processes that will be involved to implement the activities effectively. Please include the monitoring schedule concerning gender activities for the next annual reporting period. Report on actions taken on any of the recommendations made by the secretariat (if applicable) to improve the level of integration of gender issues in the project.

Confirmation and Acknowledgement of Information *

* This is a required question to submit section 4 of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in section 4 is complete and ready for submission.

Section 5: Annexes

Section 5: Annexes

Please note that this is section 5 of the six Annual Performance Report (APR) sections. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

Annex 1: Updated implementation timetable for the Funded Activity

funding-proposal-annex-5-template-implementation-timetable.xlsx

Submit only if there are any changes from implementation plan submitted in the FAA.

Annex 2: Accredited Entity compliance reports

GCF AE Self-assessment Template v2.1 2020.docx

Self-assessment reports, Report on Actions pursuant to Clause 18.02, if applicable. Self-assessment reports: In accordance with the AMA requirement in Clause 13.01 of the Accreditation Master Agreement, with the Fiduciary Principles and Standards, ESS and Gender Policy. Report on Actions pursuant to Clause 18.02: Only applicable to International Accredited Entities. In accordance with the Monitoring and Accountability Framework, a report on its actions carried out or planned to be carried out pursuant to Clause 18.02 of the Accreditation Master Agreement.

Please provide comments on the annexes attached above if any.

Confirmation and Acknowledgement of Information *

* This is a required question to submit section 5 of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in section 5 is complete and ready for submission.

Section 6: Attachments

Section 6: Attachments

Please note that this is section 6 of the six Annual Performance Report (APR) sections. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

Click on '+ Add row' to attach more than one document.

Category of Covid responses to GCF_2020.docx

Financial Budget - GCF WSRN November 2020.pdf

Submit the Unaudited/Audited financial statement and Interim/Final evaluation report (as required by FAA). Submit a supporting document for Section 2.4. (Update Progress on the Logic Framework Indicators), describing the calculation methodology for the current values provided.

This sub-section 2.4 is not applicable for REDD+ Results-Based Payments Projects.

Other Attachments (if any). Such as additional budget-related information, loan repayment schedules to GCF (interest/principal), equity investment schedules, other related reports relevant to the Funded Activity, statements of capital account, valuation reports, credit guarantee agreements, investor reports, and others, as specified in the relevant legal agreements (e.g. Funded Activity Agreement, Shareholders Agreement)

For the Annual Performance Report of REDD+ Results-Based Payments projects, provide 'Implementation Timetable/Milestones for the next reporting period' and 'Financial Progress Details' as an attachment in this section.

Comments from AE (if any)

The budget reallocation to support the changes made in Section 3.2 (Financial Progress-Grant). The budget reallocation is within the 10% as per the FAA clause 6. Administration of Grant by the Accredited Entity, 6.01 Permitted Reallocation. Any reallocation among the Funded Activity Components described in the Budget resulting in a variation of more than ten percent (10% of the previously agreed Budget for the Component from which the funds are to be reallocated, must be approved in writing by the Fund in advance.

Confirmation and Acknowledgement of Information *

* This is a required question to submit section 6 of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in section 6 is complete and ready for submission.

Additional Section: COVID-19 Impact

Additional Section: COVID-19 Impact

In this additional section of the Annual Performance Report (APR), please provide an update of COVID-19 impact on your project/programme. APR will be considered valid only after all the six sections and the additional section on COVID-19 are filled with relevant details.

Please indicate if your project/programme is adversely impacted by the COVID-19 pandemic.

Yes

Please choose the severity of overall impact.

Facing delays

Description of levels of severity:
1. On-track with no or minor impact: No or minor impact on project implementation and corresponding annual activities.
2. Facing delays: Implementation progress faced delays in the timeline but did not require any substantial changes in the implementation plan.
3. A minor change(s) required: Changes that are not classified as Major changes but requires intervention from GCF.
4. A major change(s) required: As per paragraph 16 of the Policy on Restructuring and Cancellation - Board Decision B.22/14 paragraph (a). Please find the link to the policy document below.

GCF Policy on Restructuring and Cancellation

Please describe an overall impact on your project/programme by the COVID-19 pandemic (100-word limit).

The outbreak of the 2019 novel coronavirus (covid-19) has triggered a global health pandemic. All of the countries of the region instituted measures to safeguard the wellbeing of their people, the most significant of which was the lock-down restricting movement of peoples at varying stages of National lockdowns and the imposition of curfews which are still in effect in most countries. These country-wide measures have slowed the rate of implementation of activities for the Project. Currently, Barbados is in the early stages of adapting to manage and cope with Covid-19.

Provide a short description of the adverse impact on your project/programme and provide references or supporting materials in the Annexes and Attachments sections as relevant.

Please describe details of challenges encountered and corrective/mitigation measures taken.

Select a type of the challenges encountered.

Supply Chain

Describe details of the challenge encountered.

Especially concerning component 1: There has been significant challenges in the supply chain due to the various ports and other shipping companies operating on reduced staff and also priority shipping being allocated for the shipment of essential public health goods and medications. As such, the Project is currently facing significant delays in the receipt of materials and equipment to start the installation of the equipment for component 1.

Sample challenges for Supply Chain:
- Delays in procurement and importation of materials, and equipment due to halt in production or lack of raw material and supplies
- Logistic challenges leading to loss of business opportunities
- Need for extensions of tender submission dates

Describe details of the corrective/mitigation measures taken as much as you can.

There has been some rerouting of shipping containers from Shanghai to Miami and then from Miami to Barbados. This rerouting, although it has extended the shipment from 50 days to 90 days, is the best route that was made available from the shipping company.

Select a type of the challenges encountered.

Field Activities

Describe details of the challenge encountered.

Due to restrictions on travel to Barbados and quarantine times for international consultants. There has been a significant delay in the execution of geotechnical studies for activities in component 1 and 3. These geotechnical studies were delayed significantly and have also delayed the manufacture of specialized equipment that requires a completed geotechnical study.

Sample challenges for Field Activities:
- Delays in travels, planned training, workshops, conferences, events, and awareness-raising events
- Limited access to project sites especially outer islands
- Postponed field missions for collecting/validating information, and conducting consultations with local stakeholders
- Measures required to ensure the security and safety of workers
- Delays in pilot projects, feasibility/baseline studies

Describe details of the corrective/mitigation measures taken as much as you can.

In 2020 the local authorities had various tiers of restrictions for works that could be done in Barbados. One of these restrictions included construction works. As such the Project Team requested special emergency passes for non-contact work to be conducted in the field.

Please describe if any support is required from the GCF to address the COVID-19 impact on your project/programme.

One of the largest procurement activities for 2021 include the procurement for Tanks for the potable water and rainwater harvesting systems. Suggestions from the GCF's OPM on methods that will allow for the streamlining and fast tracking of the procurement and subsequent installations of the PTP and RWH equipment.

Confirmation and Acknowledgement of Information *

* This is a required question to submit the additionla section of the Annual Performance Report (APR).

[X] The accredited entity hereby confirms that the information provided in the additional section on COVID-19 is complete and ready for submission.